1,0210		SEQUENCE LISTING
. )	(1) GENERAL	INFORMATION:
	(i) AP	PLICANT: Luo, Yuling
		Xiomei, Xu
5	(ii) TI	TLE OF INVENTION: Semaphorin K1 Polypeptides
	(iii) NU	MBER OF SEQUENCES: 4
	(iv) C	ORRESPONDENCE ADDRESS:
	(.	A) ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
	(:	B) STREET: 75 DENISE DRIVE
10	(	C) CITY: HILLSBOROUGH
	(	D) STATE: CALIFORNIA
	(	E) COUNTRY: USA
	(	F) ZIP: 94010
	(v) CO	MPUTER READABLE FORM:
15	(.	A) MEDIUM TYPE: Floppy disk
	(	B) COMPUTER: IBM PC compatible
	(	C) OPERATING SYSTEM: PC-DOS/MS-DOS
	(:	D) SOFTWARE: PatentIn Release #1.0, Version #1.30
	(vi) CU	RRENT APPLICATION DATA:
20 ⋤	(.	A) APPLICATION NUMBER:
	(	B) FILING DATE:
N	(	C) CLASSIFICATION:
20 F H N U	(viii) AT	TORNEY/AGENT INFORMATION:
₩: 3	(.	A) NAME: OSMAN, RICHARD A
25	(:	B) REGISTRATION NUMBER: 36,627
25 🗇		C) REFERENCE/DOCKET NUMBER: EXEL98-001
į.	(ix) TE	LECOMMUNICATION INFORMATION:
<b>≓</b> √n		A) TELEPHONE: (650) 343-4341
ü	(	B) TELEFAX: (650) 343-4342
30 ==		
		TION FOR SEQ ID NO:1:
		QUENCE CHARACTERISTICS:
		A) LENGTH: 2498 base pairs
25	•	B) TYPE: nucleic acid
35		C) STRANDEDNESS: double
	•	D) TOPOLOGY: linear
	, , ,	LECULE TYPE: cDNA
	(ix) FE	
40	•	A) NAME/KEY: CDS
40		B) LOCATION: 11902
	(X1) SE	QUENCE DESCRIPTION: SEQ ID NO:1:

15

10

CTG CTG CTG CTC TGG GCG GCC GCC GCC TCC GCC CAG GGC CAC CTA Leu Leu Leu Leu Trp Ala Ala Ala Ser Ala Gln Gly His Leu

1

	AGG	AGC	GGA	CCC	CGC	ATC	TTC	GCC	GTC	TGG	AAA	GGC	CAT	GTA	GGG	CAG		96
	Arg	Ser	Gly	Pro	Arg	Ile	Phe	Ala	Val	Trp	Lys	Gly	His	Val	Gly	Gln		
				20					25					30				
	GAC	CGG	GTG	GAC	TTT	GGC	CAG	ACT	GAG	CCG	CAC	ACG	GTG	CTT	TTC	CAC	1	44
5	Asp	Arg	Val	Asp	Phe	Gly	Gln	Thr	Glu	Pro	His	Thr	Val	Leu	Phe	His		
			35					40					45					
		CCA															]	.92
	Glu	Pro	Gly	Ser	Ser	Ser		Trp	Val	Gly	Gly	_	Gly	Lys	Val	Tyr		
10	ama	50	a. a	mma	999	ar a	55	220	220	aar	mam	60	999	7. CC	ama.	3 3 M		
10		TTT															2	240
	ьеи 65	Phe	Asp	Pne	PIO	70	GIY	гуя	ASII	АІа	75	Val	Arg	1111	vai	80		
		GGC	ጥሮሮ	ΔCΔ	AAG	_	TCC	тст	СТС	GAT		CGG	GAC	TGC	GAG		2	288
		Gly															_	
15		1			85	1		-4 -		90	1	,	-	-	95			
	TAC	ATC	ACT	CTC	CTG	GAG	AGG	CGG	AGT	GAG	GGG	CTG	CTG	GCC	TGT	GGC	3	36
anthons.	Tyr	Ile	Thr	Leu	Leu	Glu	Arg	Arg	Ser	Glu	Gly	Leu	Leu	Ala	Cys	Gly		
				100					105					110				
	ACC	AAC	GCC	CGG	CAC	CCC	AGC	TGC	TGG	AAC	CTG	$\operatorname{GTG}$	AAT	GGC	ACT	GTG	, 3	884
20 📮	Thr	Asn	Ala	Arg	His	Pro/	Ser	Cys	$\operatorname{Trp}$	Asn	Leu	Val	Asn	Gly	Thr	Val		
<u>ļ</u>			115					120					125					
ij.	GTG	CCA	CTT	GGC	GAG	ATG	AGA	GGC	TAC	GCC	CCC	TTC	AGC	CCG	GAC	GAG	4	32
g	Val	Pro	Leu	Gly	Glu	Met	_	Gly	Tyr	Ala	Pro		Ser	Pro	Asp	Glu		
₿		130					135					140				~~~		
25 🚍		TCC													_		4	80
<u>u</u>		Ser	Leu	vaı	ren		GIU	GIY	Asp	GIU		Tyr	ser	Int	iie	160		
<u> </u>	145	CAG	CAA	<b>ጥ</b> አ ር	አአጥ	150 GGG	AAG	አጥሮ	CCT	CGG	155	CCC	CGC	ΔTĊ	CGG		<b>-</b>	528
i T		Gln															_	,20
30 <sup>©</sup>	шуз	0111	O <sub>±</sub> u	- 7 -	165	O. J	Lyb	110	110	170	1110	9	5		175	0-1		
	GAG	AGT	GAG	CTG		ACC	AGT	GAT	ACT	GTC	ATG	CAG	AAC	CCA	CAG	TTC	5	76
	Glu	Ser	Glu	Leu	Tyr	Thr	Ser	Asp	Thr	Val	Met	Gln	Asn	Pro	Gln	Phe		
				180					185					190				
	ATC	AAA	GCC	ACC	ATC	GTG	CAC	CAA	GAC	CAG	GCT	TAC	GAT	GAC	AAG	ATC	$\epsilon$	24
35	Ile	Lys	Ala	Thr	Ile	Val	His	Gln	Asp	Gln	Ala	Tyr	Asp	Asp	Lys	Ile		
			195					200					205					
		TAC															€	72
	Tyr	Tyr	Phe	Phe	Arg	Glu	Asp	Asn	Pro	Asp	Lys	Asn	Pro	Glu	Ala	Pro		
		210					215					220					_	
40		AAT															7	720
		Asn	Val	Ser	Arg		Ala	GIn	Leu	Cys		GLY	Asp	GIn	GIY			
	225	» Om	m C 3	CEC	TIC N	230	TO C	7 7 C	TCC	7 7 C	235	dana.	CITIC	א א א א	ccc	240	-	160
		AGT															,	768
	GIU	Ser	ser	ьeu	ser.	val	ser.	гуу	тър	ASII	TIIL	File	ьeu	пув	Ald	MEL		

						245					250					255		
		CTG	GTA	TGC	AGT		GCT	GCC	ACC	AAC		AAC	TTC	AAC	AGG		CAA	816
			Val															-
					260	_				265	•				270			
5		GAC	GTC	TTC	CTG	CTC	CCT	GAC	CCC	AGC	GGC	CAG	TGG	AGG	GAC	ACC	AGG	864
		Asp	Val	Phe	Leu	Leu	Pro	Asp	Pro	Ser	Gly	Gln	Trp	Arg	Asp	Thr	Arg	
		_		275					280					285				
		GTC	TAT	GGT	GTT	TTC	TCC	AAC	CCC	TGG	AAC	TAC	TCA	GCC	GTC	TGT	GTG	912
		Val	Tyr	Gly	Val	Phe	Ser	Asn	Pro	Trp	Asn	Tyr	Ser	Ala	Val	Cys	Val	
10			290					295					300					
		TAT	TCC	CTC	GGT	GAC	ATT	GAC	AAG	GTC	TTC	CGT	ACC	TCC	TCA	CTC	AAG	960
		Tyr	Ser	Leu	Gly	Asp	Ile	Asp	Lys	Val	Phe	Arg	Thr	Ser	Ser	Leu	Lys	
		305					310					315					320	
		GGC	TAC	CAC	TCA	AGC	CTT	CCC	AAC	CCG	CGG	CCT	GGC	AAG	TGC	CTC	CCA	1008
15		Gly	Tyr	His	Ser	Ser	Leu	Pro	Asn	Pro	Arg	Pro	Gly	Lys	Cys	Leu	Pro	
						325					330					335		
=	-	GAC	CAG	CAG	CCG	ATA	CCC	ACA	GAG	ACC	TTC	CAG	GTG	GCT	GAC	CGT	CAC	1056
<u>.</u> .	⊒ n	Asp	Gln	Gln	Pro	Ile	Pro	Thr	Glu	Thr	Phe	Gln	Val	Ala	Asp	Arg	His	
ī	j				340					345					350			
20			GAG															1104
₹		Pro	Glu	Val	Ala	Gln	Arg	Val	Glu	Pro	Met	Gly	Pro	Leu	Lys	Thr	Pro	
1	U .I.			355					360					365				
i.	J. N		TTC															1152
=		Leu	Phe	His	Ser	Lys	Tyr	His	Tyr	Gln	Lys	Val		Val	His	Arg	Met	
25	3		370					375					380					
Į.	Ą		GCC															1200
i.	≟ ≟` 0		Ala	Ser	His	Gly		Thr	Phe	His	Val		Tyr	Leu	Thr	Thr		
1	 0	385					390					395	~-~	~ ~	~.~	a. a	400	1040
Ĩ	Ď		GGC															1248
30 -		Arg	Gly	Thr	Пе		Lys	vaı	vaı	Glu		GIY	GIU	GIN	GIU		ser	
						405	3 mg	ar a	3 m.C	an a	410	mma	000	000	000	415	aaa	1296
			GCC												_	_	_	1296
		Pne	Ala	Pne		iie	Met	Gru	me	425	PIO	PHE	Arg	Arg	430	на	Ala	
35		א תייבי	CAG	7 CC	420	TCC	CTC	CAT	CCT		ccc	N.C.C	AAC	CTC		CTC	ACC	1344
33			Gln															1911
		116	GIII	435	Mec	SEL	шеи	Asp	440	Giu	Arg	Arg	цур	445	ı yı	vai	Der	
		TCC	CAG		GNG	стс	ΔGC	CAG		CCC	СТС	GAC	CTG		GAG	GTC	тат	1392
			Gln															1372
40		JCI	450	110	Gru	VUL	201	455	VUI		⊂u	1100	460	CIO	<b>524</b>		-1-	
-10		GGC	GGG	GGC	ፐርር	CAC	GGT		СТС	ATG	TCC	CGA		כככ	TAC	TGC	GGC	1440
•			Gly															
		465	- <u>-</u> <u>,</u>	-1	<b>-</b>		470	J, 5				475	p	0	- <b>/ -</b>	-15	480	
			GAC	CAA	GGC	CGC		ATC	TCC	ATC	TAC		TCC	GAA	CGG	TCA		1488
		- 30		~										~- <del> 1</del>		- <b></b>		

	Trp Asp Gln Gly Arg Cys Ile Ser Ile Tyr Ser Ser Glu Arg Ser Val	
	485 490 495	
	CTG CAA TCC ATT AAT CCA GCC GAG CCA CAC AAG GAG TGT CCC AAC CCC	1536
	Leu Gln Ser Ile Asn Pro Ala Glu Pro His Lys Glu Cys Pro Asn Pro	
5	500 505 510	
	AAA CCA GAC AAG GCC CCA CTG CAG AAG GTT TCC CTG GCC CCA AAC TCT	1584
	Lys Pro Asp Lys Ala Pro Leu Gln Lys Val Ser Leu Ala Pro Asn Ser	
	515 520 525	
	CGC TAC TAC CTG AGC TGC CCC ATG GAA TCC CGC CAC GCC ACC TAC TCA	1632
10	Arg Tyr Tyr Leu Ser Cys Pro Met Glu Ser Arg His Ala Thr Tyr Ser	
	530 535 540	
	TGG CGC CAC AAG GAG AAC GTG GAG CAG AGC TGC GAA CCT GGT CAC CAG	1680
	Trp Arg His Lys Glu Asn Val Glu Gln Ser Cys Glu Pro Gly His Gln	
	545 550 555 560	
15	AGC CCC AAC TGC ATC CTG TTC ATC GAG AAC CTC ACG GCG CAG CAG TAC	1728
	Ser Pro Asn Cys Ile Leu Phe Ile Glu Asn Leu Thr Ala Gln Gln Tyr	
	565 570 575	
Q	GGC CAC TAC TTC TGC GAG GCC CAG GAG GGC TCC TAC TTC CGC GAG GCT	1776
₽	Gly His Tyr Phe Cys Glu Ala Gln Glu Gly Ser Tyr Phe Arg Glu Ala	
口 迎 司 20 <u>두</u>	580 585 590	
<del>-</del>	CAG CAC TGG CAG CTG CCC GAG GAC GGC ATC ATG GCC GAG CAC CTG	1824
N	Gln His Trp Gln Leu Leu Pro Glu Asp Gly Ile Met Ala Glu His Leu	
<u>u</u>	595 600 605	
<u> </u>	CTG GGT CAT GCC TGT GCC CTG GCC TCC CTC TGG CTG GGG GTG CTG	1872
25 🗖	Leu Gly His Ala Cys Ala Leu Ala Ala Ser Leu Trp Leu Gly Val Leu	
u.	610 615 620	
<u> </u>	CCC ACA CTC ACT CTT GGC TTG CTG GTC CAC TAGGGCCTCC CGAGGCTGGG	1922
ᆣ	Pro Thr Leu Thr Leu Gly Leu Leu Val His	
4	625 630	
30 <sup>©</sup>	CATGCCTCAG GCTTCTGCAG CCCAGGGCAC TAAAACGTCT CACACTCAGA GCCGGCTGGC	1982
	CCGGGAGCTC CTTGCCTGCC ATTTTTCCA GGGGACAGAA TAACCCAGTG GAGGATGCCA	2042
	GGCCTGGAGA CGTCCAGCCG CAGGCGGCTG CTGGGCCCCA GGTGGCGCAC GGATGGTGAG	2102
	GGGCTGAGAA TGAGGGCACC GACTGTGAAG CTGGGGCATC GATGACCCAA GACTTTATTT	2162
	TTTGGAAAAT ATTTTTCAGA CTCCTCAAAC TTGACTAAAT GCAGCGATGC TCCCAGCCCA	2222
35	AGAGCCCATG GGTCGGGGAG TGGGTTTGGA TAGGAGAGCT GGGATTCCAT CTCGACCCTG	2282
	GGGCTGAGGC CTGAGTCCTT TTGGATTCTT GGTACCCACA TTGCCTCCTT CCCCTCCTTT	2342
	TTTCAGGGGT GGGTGGTTGG TGTTCCTGAA GACCCAGGGA TACCCTTTGT CCAGCCCTGT	2402
	CCTTGGCAGC TCCCTTTTTG GTCCTGGGTC CCACAGGACA GCCGCCTTGC ATGTTTATTG	2462
	AAGGATGTTT GCTTTCCGGA CGGAAGGACG GAAAAA	2498
40		

## (2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 634 amino acids
  - (B) TYPE: amino acid

23 EX98-001

24

## (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

(xi) SEQUENCE	DESCRIPTION:	SEQ	ID N	10 : 2 :	
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		(3	K1) S	PEQUI	INCE	ひとらい	LKIP.	LION	SEC	עו ע	NO: 4	2:				
	Leu	Leu	Leu	Leu	Leu	$\operatorname{Trp}$	Ala	Ala	Ala	Ala	Ser	Ala	Gln	Gly	His	Leu
5	1				5					10					15	
	Arg	Ser	Gly	Pro	Arg	Ile	Phe	Ala	Val	Trp	Lys	Gly	His	Val	Gly	Gln
				20					25					30		
	Asp	Arg	Val	Asp	Phe	Gly	Gln	Thr	Glu	Pro	His	Thr	Val	Leu	Phe	His
			35					40					45			
10	Glu	Pro	Gly	Ser	Ser	Ser	Val	Trp	Val	Gly	Gly	Arg	Gly	Lys	Val	Tyr
		50	-				55					60				
	Leu	Phe	Asp	Phe	Pro	Glu	Gly	Lys	Asn	Ala	Ser	Val	Arg	Thr	Val	Asn
	65		-			70	_	_			75					80
	Ile	Gly	Ser	Thr	Lys	Gly	Ser	Cys	Leu	Asp	Lys	Arg	Asp	Cys	Glu	Asn
15					85	-		-		90	-		-	-	95	
	Tvr	Ile	Thr	Leu		Glu	Arq	Arq	Ser	Glu	Gly	Leu	Leu	Ala	Cys	Gly
	- 2 -			100					105		•			110	-	-
	Thr	Asn	Δla		His	Pro	Ser	Cvs		Asn	Leu	Val	Asn	Glv	Thr	Val
			115	5			_	120	<b>L</b>				125			
20 🛓	Val	Pro		Glv	G] 11	Met	Ara		Tvr	Ala	Pro	Phe		Pro	Asp	Glu
20 <del>-</del>	vai	130	БСС	017	014		135	011	- 1 -			140				
N	λan		T.eu	V21	T.eu	Phe		Glv	Δαη	Glu	Val		Ser	Thr	Ile	Ara
Ü	145	361	пса	vai	ыса	150	O L U	Gry	7100	00	155	-1-	501	****	110	160
T		Gln	Glu	Тчг	λan		Tare	Tle	Pro	Δνα		Δτα	Δra	Tle	Arg	
25 =	пур	GIII	GIU	TYL	165	Gry	цур	110	110	170	1110	9	1119	110	175	O. J
25	C1	Cox	C1.,	T 011		Thr	Ser	λαη	Thr		Mot	Gln	Agn	Pro	Gln	Dhe
<u>L</u>	Giu	Ser	Giu	180	TYL	1111	Der	дар	185	Vai	MCC	0111	7,511	190	0111	1110
<u>ļ.</u>	T10	Trea	ת ות		T10	Va I	Uic	Cln		Gln	Λla	ጥህን	Nan		Lys	Tle
<u>.</u>	116	гуу		1111	116	vai	пть	200	Asp	GIII	AIG	ıyı	205	дод	цуз	110
30 <sup>©</sup>	TT	TT	195	Dho	7. ~~	C1	7 an		Dro	7 an	Lva	Λαn		Glu	λlo	Pro
30	TYL	210	Pne	PHE	Arg	GIU	215	ASII	·	Asp	цуъ	220	FIU	Giu	Ala	110
	T		T70 7	Com	7 ~~~	17n ]		C1 =	T 011	Crra	7 ~~		λαν	Gl n	Gly	Glv
		ASII	vaı	261	Arg	230	ніа	GIII	пец	Cys	235	Gry	дар	0111	Gry	240
	225	C	Com	T 011	Cox		Com	T	m, vero	Nan		Dho	Lou	Luc	Ala	
35	GIU	Ser	Ser	ьеи		vai	Ser	пур	пр	250	1111	FIIC	пец	цуз	255	MCC
33	T	77-3	<b>C</b>	Com	245	71.	710	Th w	7 00		7 an	Dho	Λαn	λνα		Gla
	Leu	vaı	Cys		Asp	Ala	АІа	1111		гуу	ASII	PHE	ASII		Leu	GIII
	_		<b>5</b> 1	260	-	D			265	<b>01</b>	G1	M	7	270	mla sa	7
	Asp	vaı		ьeu	Leu	Pro	Asp		ser	GIÀ	GIII	пр		ASP	Thr	Arg
40		_	275			_	_	280	_	_		<b>a</b>	285		<b>~</b>	**- 3
40	Val	_	Gly	Val	Phe	Ser		Pro	Trp	Asn	Tyr		Ala	vaı	Cys	vaı
		290			_		295				_	300	_	_	_	_
	_	Ser	Leu	Gly	Asp		Asp	Lys	Val	Phe		Thr	Ser	Ser	Leu	
	305			_	_	310				_	315		_	_	_	320
	Gly	Tyr	His	Ser	Ser	Leu	Pro	Asn	Pro	Arg	Pro	Gly	Lys	Cys	Leu	Pro

						325					330					335	
		Asp	Gln	Gln	Pro	Ile	Pro	Thr	Glu	Thr	Phe	Gln	Val	Ala	Asp	Arg	His
					340					345					350		
		Pro	Glu	Val	Ala	Gln	Arg	Val	Glu	Pro	Met	Gly	Pro	Leu	Lys	Thr	Pro
5				355					360					365			
		Leu	Phe	His	Ser	Lys	Tyr	His	Tyr	Gln	Lys	Val	Ala	Val	His	Arg	Met
			370					375					380				
		Gln	Ala	Ser	His	Gly	Glu	Thr	Phe	His	Val	Leu	Tyr	Leu	Thr	Thr	Asp
		385					390					395					400
10		Arg	Gly	Thr	Ile	His	Lys	Val	Val	Glu	Pro	Gly	Glu	Gln	Glu	His	Ser
						405					410					415	
		Phe	Ala	Phe	Asn	Ile	Met	Glu	Ile	Gln	Pro	Phe	Arg	Arg	Ala	Ala	Ala
					420					425					430		
- <b>-</b>		Ile	Gln	Thr	Met	Ser	Leu	Asp		Glu	Arg	Arg	Lys		Tyr	Val	Ser
15				435					440					445			
		Ser		Trp	Glu	Val	Ser		Val	Pro	Leu	Asp		Cys	Glu	Val	Tyr
	m		450		_			455	_		_	_	460	_		_	~ 7
	ŭ		Gly	Gly	Cys	His		Cys	Leu	Met	Ser		Asp	Pro	Tyr	Cys	
20	Ō	465	_			_	470		_			475	-	<b>a</b> 1			480
20	F	Trp	Asp	Gln	GIY		Cys	iie	Ser	ше		ser	ser	GIU	Arg		vaı
		<b>.</b>	G1	<b>a</b>	T] -	485	D	77.	<b>a</b> 1	D	490	T	C1	۵.,	Dwo	495	Dwo
	W	ьeu	GIN	Ser		ASII	Pro	Ala	GIU	505		гуя	GIU	Cys	510	ASII	PIO
	Ō	T	Dwo	7 ~~	500	71.	Dro	Ton	Cln			Cor	Tou	ת דת		Λαη	Ser
25	B	гуя	PIO	Asp 515	ьуѕ	Ата	PIO	ьеи	520	цуб	vai	ser	пеп	525	FIO	ASII	Ser
25		λνα	Тчт	Tyr	T.O.I	Sor	Cve	Dro		Glu	Ser	Δνα	Hic		Thr	ጥረታ	Ser
	L L	Arg	530	ıyı	ьеu	261	Cys	535	Mec	Giu	Der	Arg	540	Aid	1111	1 7 1	DCI
	W H H Q	Trn		His	Lvs	Glu	Δsn		Glu	Gln	Ser	Cvs		Pro	Glv	His	Gln
	Ф	545	****9		Lys	OIG	550	•41	014	0111	501	555	0		0-1		560
30	Ū		Pro	Asn	Cvs	Ile		Phe	Ile	Glu	Asn		Thr	Ala	Gln	Gln	
					- 2 -	565					570					575	-
		Glv	His	Tyr	Phe		Glu	Ala	Gln	Glu	Gly	Ser	Tyr	Phe	Arg	Glu	Ala
		•		-	580	-				585	-		-		590		
		Gln	His	Trp	Gln	Leu	Leu	Pro	Glu	Asp	Gly	Ile	Met	Ala	Glu	His	Leu
35				595					600					605			
		Leu	Gly	His	Ala	Cys	Ala	Leu	Ala	Ala	Ser	Leu	Trp	Leu	Gly	Val	Leu
			610					615					620				
		Pro	Thr	Leu	Thr	Leu	Gly	Leu	Leu	Val	His						
		625					630										
40																	

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 1818 base pairs
  - (B) TYPE: nucleic acid

				( (						)I.E								
				-	) TO													
					LECUI		YPE:	CDNA	Ą									
			(ix)		ATURI													
5				(2	A) NA	ME/I	KEY:	CDS										
				•	3) L(													
			(xi)	SE	QUENC	CE DI	ESCR!	PTIC	ON: 5	SEQ I	ID NO	0:3:						
	1	ATG	GGC	ACT	TTG	TGT	GTT	AGT	ATT	AGA	TTA	CTG	ATG	ATT	TTA	TCA	GCC	48
	i	Met	Gly	Thr	Leu	Cys	Val	Ser	Ile	Arg	Leu	Leu	Met	Ile	Leu	Ser	Ala	
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	1	ATC	ACA	GCT	GCT	AAA	TCT	CGG	TTT	ATA	GAT	AAG	CCA	AGG	CTG	ATT	GTT	96
		Ile	Thr	Ala	Ala	Lys	Ser	Arg	Phe	Ile	Asp	Lys	Pro	Arg	Leu	Ile	Val	
						655					660					665		
	1	AAC	CTA	ACT	GAT	GGG	TTT	GGA	CAG	CAC	CGG	TTT	TTT	GGA	CCC	CAG	GAA	144
15	1	Asn	Leu	Thr	Asp	Gly	Phe	Gly	Gln	His	Arg	Phe	Phe	Gly	Pro	Gln	Glu	
					670					675					680			
_		CCA	CAC	ACT	GTG	CTT	TTT	CAC	AGC	CTC	AAC	TCT	TCA	GAC	GTA	TAT	GTG	192
		Pro	His	Thr	Val	Leu	Phe	His	Ser	Leu	Asn	Ser	Ser	Asp	Val	Tyr	Val	
##.	i			685					690					695				
20 <del> </del>   1	; : (	GGA	GGT	AAT	AAT	ACC	ATC	TAT	TTG	TTT	$\mathtt{GAT}$	$\mathbf{T}\mathbf{T}\mathbf{T}$	GCT	CAC	AGC	$\mathtt{TCC}$	AAC	240
أط	. (	Gly	Gly	Asn	Asn	Thr	Ile	Tyr	Leu	Phe	Asp	Phe	Ala	His	Ser	Ser	Asn	
Ŋ			700					705					710					
Ų	. (	GCA	TCC	ACA	GCT	TTG	ATA	AAC	ATA	ACT	AGC	ACA	$\mathtt{CAT}$	AAT	ACC	CAC	CGG	288
Q1	1	Ala	Ser	Thr	Ala	Leu	Ile	Asn	Ile	Thr	Ser	Thr	His	Asn	Thr	His	Arg	
25		715					720					725					730	
25 U	· '	TTA	TCT	AGT	ACC	TGC	GAA	AAC	TTT	ATA	ACT	CTG	CTT	CAT	AAC	CAG	ACA	336
  -4	: ]	Leu	Ser	Ser	Thr	Cys	Glu	Asn	Phe	Ile	Thr	Leu	Leu	His	Asn	Gln	Thr	
H	:					735					740					745		
=	• (	GAT	GGG	CTG	CTA	GCT	TGT	GGT	ACT	AAC	TCA	CAG	AAA	CCC	AGC	TGC	TGG	384
30 <sup>©</sup>	1	Asp	Gly	Leu	Leu	Ala	Cys	Gly	Thr	Asn	Ser	Gln	Lys	Pro	Ser	Cys	Trp	
					750					<b>7</b> 55					760			
	(	CTG	ATA	AAC	AAC	CTA	ACA	ACT	CAA	TTT	TTG	GGG	CCA	AAA	CTA	GGC	TTA	432
	-	Leu	Ile	Asn	Asn	Leu	Thr	Thr	Gln	Phe	Leu	Gly	Pro	Lys	Leu	Gly	Leu	
				765					770					775				
35	(	GCC	CCC	TTC	TCA	CCA	TCA	TCT	GGC	AAT	CTG	GTG	CTG	TTT	GAC	CAG	AAT	480
	1	Ala	Pro	Phe	Ser	Pro	Ser	Ser	Gly	Asn	Leu	Val	Leu	Phe	Asp	Gln	Asn	
			780					785					790					
	(	GAC	ACC	TAT	TCC	ACC	ATT	AAC	CTC	TAC	AAG	AGC	CTC	AGT	GGC	TCT	CAC	528
	1	Asp	Thr	Tyr	Ser	Thr	Ile	Asn	Leu	Tyr	Lys	Ser	Leu	Ser	Gly	Ser	His	
40		795					800					805					810	
	i	AAG	TTT	AGG	AGG	ATC	GCT	GGC	CAA	GTA	GAA	CTA	TAC	ACG	AGT	GAC	ACC	576
	1	Lys	Phe	Arg	Arg	Ile	Ala	Gly	Gln	Val	Glu	Leu	Tyr	Thr	Ser	Asp	Thr	
				_	_	815					820					825		
	(	GCC	ATG	CAC	CGG	CCA	CAG	TTT	GTC	CAG	GCA	ACA	GCT	GTG	CAT	AAA	AAT	624

(C) STRANDEDNESS: double

Ala Met His Arg Pro Gln Phe Val Cln Ala Thr Ala Val His Lys Asn  830 835 840  GAA TCT TAT GAT GAT AAA ATC TAC TTT TC TTT CAA GAA AAC AGC CAC Glu Ser Tyr Asp Asp Lys 11e Tyr Phe Phe Phe Gln Glu Asn Ser His  850 855 855  AGT GAC TCC AAA CAG TTT CCA CAT ACT GTA CCT AGA GTG GGG CAG GTG Ser Asp Phe Lys Gln Phe Pro His Thr Val Pro Arg Val Gly Gln Val  860 865 865 870  TGC TCT AGT GAT CAA GGT GGG GAG AGC TCC CTG TCT GTC TAC AAG TGG TGC TCT AGT GAT CAA GGT GGG GAG AGC TCC CTG TCT GTC TAC AAG TGG TGC TCT AGT GAT CAA GGC AGG CTG GCG TGT GTA GAC TAC AAG TGG ACC ACC TTT TTA AAA GCC AGA CTG GCG TGT GTA GAC TAT GAT ACT GGA ATC ACC ACC TTT TTA AAA GCC AGA CTG GCG TGT GTA GAC TAT GAT ACT GGA ATT TTP Phe Leu Lys Ala Arg Leu Ala Cys Val Asp Tyr Asp Thr Gly 895 900  15 AGA ATC TAC AAT GAG CTA CAA GAT ATT TCC ATC TGG CAA GCC CCA GAG ATG II Tyr Asn Glu Leu Gln Asp II e Phe II e Trp Gln Ala Pro Glu 910 915 920  AAC AGC TGG GAA GAG ACC TCC ATC TAT GGA CTT TTT TTG AGC CCG TGG ASN Ser Trp Glu Glu Thr Leu II e Tyr Gly Leu Phe Leu Ser Pro Trp 922 920  AAS Ser Trp Glu Glu Thr Leu II e Tyr Gly Leu Phe Leu Ser Pro Trp 923 930 935  TTT AAG ACA TCC AAG TTG AAG AAA AAT TAT CAT GTA AAG GAC ACT GTG 960  ASN Phe Ser Ala Val Cys Val Phe Thr Val Lys Asp II e Asp His Val 940 945  TTT AAG ACA TCC AAG TGC AAG AAA AAT TAT CAT CAT CAT AAA CTC CCC ACA CCT 1008  AG PRO Lys Thr Ser Lys Leu Lys Asn Tyr His His Lis Lys Leu Pro Thr Pro 945  Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro 955  Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro 960  AAG ACC ACG GG CAA TGC AAG ATC CCA AGA GAT ACT CAT GAG CAT GTC CAC ACA CCT 1008  AAG ACC ACT GT		בות	Mot	Uic	λνα	Pro	Gln	Dhe	Val	Gln	Δla	Thr	Δl =	V=1	Hic	Laze	Δen	
GAA TCT TAT GAT GAT AAA ATC TAC TTT TCC TTT CAA GAA AAC AGC CAC   672		Ala	MEC	urs		PIO	GIII	FIIC	vai		AIG	1111	Ala	vai		цуз	ASII	
S		GAA	TCT	TAT		GAT	AAA	ATC	TAC	TTT	TTC	TTT	CAA	GAA	AAC	AGC	CAC	672
AGT GAC TTC AAA CAG TTT CCA CAT ACT GTA CCT AGA GTG GGG CAG GTG   F20   Ser Asp Phe Lys GIn Phe Pro His Thr Val Pro Arg Val Gly Gin Val		Glu	Ser	Tyr	Asp	Asp	Lys	Ile	Tyr	Phe	Phe	Phe	Gln	Glu	Asn	Ser	His	•
Ser	5			845					850					855				
10																		720
TGC TCT AGT GAT CAA GGT GGG GAG AGC TCC CTG TCT GTC TAC AAG TGG   768		Ser	Asp	Phe	Lys	Gln	Phe		His	Thr	Val	Pro		Val	Gly	Gln	Val	
10				- ~-	~~ -	~ .			~~~	200	maa	ama		ата	mn a	3 3 C	maa	7.60
875	10																	768
ACC   ACC   TTT   TTA   AAA   GCC   AGA   CTG   GCG   TGT   GTA   GAC   TAT   GAT   ACT   GGA   ACT   GGA   ACT   TAT   TAT   TAT   TAT   TAT   AAA   ACC   ACA   ACT   GCG   ACA   ACT	10		Ser	ser	Asp	GIN		GIY	GIU	ser	Ser		Sei	vaı	ıyı	гуѕ		
The The The Release   Lew Regis   14			ACC	սուրս	тта	ΔΔΔ		AGA	CTG	GCG	тст		GAC	ТАТ	GAT	ACT		816
15																		
Arg   11e   Tyr   Ash   Glu   Leu   Gln   Asp   11e   Phe   11e   Tyr   Gln   Ala   Pro   Glu   910   910   915   920						-		3			_		•	•	-		-	•
AAC AGC TGG GAA GAG ACT CTC ATC TAT GAG CTT TTT TGG AGC CTG TGG P12  AAS SET TTP G1U G1U TTP LEU I1E TYP G1Y LEU PHE LEU SET PTO TTP 950  AAS PHE SET AIA VAI CYS VAI PHE THY VAI LYS ASP I1E ASP HIS VAI 950  TTT AAG ACA TCC ACA AAA AAT TAT CAT CAT CAT CAT	15	AGA	ATC	TAC	AAT	GAG	CTA	CAA	GAT	ATT	TTC	ATC	TGG	CAA	GCC	CCA	GAG	864
AAC AGC TGG GAA GAG ACT CTC ATC TAT GGA CTT TTT TTG AGC CCG TGG 912  ASN Ser Trp Glu Glu Thr Leu Ile Tyr Gly Leu Phe Leu Ser Pro Trp  20		Arg	Ile	Tyr	Asn	Glu	Leu	Gln	Asp	Ile	Phe	Ile	Trp	Gln	Ala	Pro	Glu	
Asn Ser Trp Glu Glu Thr Leu Ile Tyr Gly Leu Phe Leu Ser Pro Trp  20	<u></u>				910					915					920			
TITE AAG ACA TCC AAG TTA AAA AAT TAT CAT CAT CAT AAA CTC CCC ACA CCT 1008  25   Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro       955	₩ M	AAC	AGC	TGG	GAA	GAG	ACT	CTC	ATC	TAT	GGA	CTT	TTT	TTG	AGC	CCG	TGG	912
TITE AAG ACA TCC AAG TTA AAA AAT TAT CAT CAT CAT CAT CAC CCC ACA CCT 1008  25   Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro		Asn	Ser	Trp	Glu	Glu	Thr	Leu	Ile	Tyr	Gly	Leu	Phe	Leu	Ser	Pro	Trp	
TITE AAG ACA TCC AAG TTA AAA AAT TAT CAT CAT CAT CAT CAC CCC ACA CCT 1008  25   Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro	20 📮																	
TITE AAG ACA TCC AAG TTA AAA AAT TAT CAT CAT CAT CAT CAC CCC ACA CCT 1008  25   Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro	-i 																	960
TITE AAG ACA TCC AAG TTA AAA AAT TAT CAT CAT CAT CAT CAC CCC ACA CCT 1008  25   Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro	u u	Asn		Ser	Ala	Val	Cys		Phe	Thr	Val	Lys		Ile	Asp	His	Val	
Phe Lys Thr Ser Lys Leu Lys Asn Tyr His His Lys Leu Pro Thr Pro   955	ij	mmm		7. CI 7.	MGG	7 7 C	ana y		7 7 TT	TT A TT	CAT	CAT		CTC	ccc	7 (7)	CCT	1000
955 960 965 970  AGA CCA GGG CAA TGC ATG AAG AAC CAT CAG CAT GTT CCC ACA GAA ACC 1056  Arg Pro Gly Gln Cys Met Lys Asn His Gln His Val Pro Thr Glu Thr 975 980 985  TTT CAG GTT GCT GAC AGA TAT CCA GAA GTT GCA GAT CCT GTA TAT CAG 1104  Phe Gln Val Ala Asp Arg Tyr Pro Glu Val Ala Asp Pro Val Tyr Gln 990 995 1000  AAG AAC AAT GCC ATG TTT CCA ATA ATT CAG TCA AAA TAT ATC TAC ACC 1152  Lys Asn Asn Ala Met Phe Pro Ile Ile Gln Ser Lys Tyr Ile Tyr Thr  35 1005 1010 1015  AAA CTA CTT GTT TAT AGG GTA GAG TAT GAG GGT GTT TTT T	25 ==															_		1006
TTT CAG GTT GCT GAC AGA TAT CCA GAA GTT GCA GAT CCT GTA TAT CAG  Phe Gln Val Ala Asp Arg Tyr Pro Glu Val Ala Asp Pro Val Tyr Gln  990  AAG AAC AAT GCC ATG TTT CCA ATA ATT CAG TCA AAA TAT ATC TAC ACC  Lys Asn Asn Ala Met Phe Pro Ile Ile Gln Ser Lys Tyr Ile Tyr Thr  1005  AAA CTA CTT GTT TAT AGG GTA GAG TAT GGA GGT GTT TTT T			цуъ	1111	Per	пуъ		цуъ	ASII	TYL	1112		Буз	Deu	110	1111		
TTT CAG GTT GCT GAC AGA TAT CCA GAA GTT GCA GAT CCT GTA TAT CAG  Phe Gln Val Ala Asp Arg Tyr Pro Glu Val Ala Asp Pro Val Tyr Gln  990  AAG AAC AAT GCC ATG TTT CCA ATA ATT CAG TCA AAA TAT ATC TAC ACC  Lys Asn Asn Ala Met Phe Pro Ile Ile Gln Ser Lys Tyr Ile Tyr Thr  1005  AAA CTA CTT GTT TAT AGG GTA GAG TAT GGA GGT GTT TTT T	last Last		CCA	GGG	CAA	TGC		AAG	AAC	CAT	CAG		GTT	CCC	ACA	GAA		1056
TTT CAG GTT GCT GAC AGA TAT CCA GAA GTT GCA GAT CCT GTA TAT CAG  Phe Gln Val Ala Asp Arg Tyr Pro Glu Val Ala Asp Pro Val Tyr Gln  990  AAG AAC AAT GCC ATG TTT CCA ATA ATT CAG TCA AAA TAT ATC TAC ACC  Lys Asn Asn Ala Met Phe Pro Ile Ile Gln Ser Lys Tyr Ile Tyr Thr  1005  AAA CTA CTT GTT TAT AGG GTA GAG TAT GGA GGT GTT TTT T	ļ	_																
TTT CAG GTT GCT GAC AGA TAT CCA GAA GTT GCA GAT CCT GTA TAT CAG  Phe Gln Val Ala Asp Arg Tyr Pro Glu Val Ala Asp Pro Val Tyr Gln  990  AAG AAC AAT GCC ATG TTT CCA ATA ATT CAG TCA AAA TAT ATC TAC ACC  Lys Asn Asn Ala Met Phe Pro Ile Ile Gln Ser Lys Tyr Ile Tyr Thr  1005  AAA CTA CTT GTT TAT AGG GTA GAG TAT GGA GGT GTT TTT T	ű m	J		-				-										
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	30 W	TTT	CAG	GTT	GCT	GAC	AGA	TAT	CCA	GAA	GTT	GCA	GAT	CCT	GTA	TAT	CAG	1104
AAG AAC AAT GCC ATG TTT CCA ATA ATT CAG TCA AAA TAT ATC TAC ACC Lys Asn Asn Ala Met Phe Pro Ile Ile Gln Ser Lys Tyr Ile Tyr Thr  1005		Phe	Gln	Val	Ala	Asp	Arg	Tyr	Pro	Glu	Val	Ala	Asp	Pro	Val	Tyr	Gln	
Lys Asn Asn Ala Met Phe Pro Ile Ile Gln Ser Lys Tyr Ile Tyr Thr  1015  AAA CTA CTT GTT TAT AGG GTA GAG TAT GGA GGT GTT TTT T					990					995					1000	)		
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AAA CTA CTT GTT TAT AGG GTA GAG TAT GGA GGT GTT TTT T		Lys	Asn	Asn	Ala	Met	Phe	Pro			Gln	Ser	Lys	Tyr	Ile	Tyr	Thr	
Lys Leu Leu Val Tyr Arg Val Glu Tyr Gly Gly Val Phe Trp Ala Thr $1020$	35																	4000
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ATT TTT TAC CTC ACT ACC ATC AAA GGG ACT ATT CAT ATA TAT GTG AGG 1248  40 Ile Phe Tyr Leu Thr Thr Ile Lys Gly Thr Ile His Ile Tyr Val Arg  1035 1040 1045 1050  TAT GAA GAT TCC AAC TCT ACA ACA GCT CTC AAC ATT TTA GAG ATA AAT 1296  Tyr Glu Asp Ser Asn Ser Thr Thr Ala Leu Asn Ile Leu Glu Ile Asn		Lys			Val	Tyr	Arg			Tyr	GIY	GIY			Trp	Ата	Thr	
11e Phe Tyr Leu Thr Thr Ile Lys Gly Thr Ile His Ile Tyr Val Arg 1035 1040 1045 1050 TAT GAA GAT TCC AAC TCT ACA ACA GCT CTC AAC ATT TTA GAG ATA AAT 1296 Tyr Glu Asp Ser Asn Ser Thr Thr Ala Leu Asn Ile Leu Glu Ile Asn		7 mm			CTTC	7. CTT	N CC			CCC	A CT	א ידיידי			יי א יי	СТС	NCG	1249
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TAT GAA GAT TCC AAC TCT ACA ACA GCT CTC AAC ATT TTA GAG ATA AAT  1296 Tyr Glu Asp Ser Asn Ser Thr Thr Ala Leu Asn Ile Leu Glu Ile Asn	10			- Y -	Leu	1111			درس	Cry	T111				- 7 -	141		
Tyr Glu Asp Ser Asn Ser Thr Thr Ala Leu Asn Ile Leu Glu Ile Asn				GAT	TCC	AAC			ACA	GCT	CTC			TTA	GAG	АТА		1296
		-		-														

	CCC	TTT	CAG	AAG	CCA	GCC	CCC	ATA	CAG	AAT	ATT	CTT	TTA	GAT	AAT	ACA	1344
		Phe															
				1070					1075					1080			
	AAT	CTA	AAG	CTT	TAT	GTA	AAT	TCA	GAG	TGG	GAG	GTG	AGT	GAG	GTG	CCA	1392
5	Asn	Leu	Lys	Leu	Tyr	Val	Asn	Ser	Glu	Trp	Glu	Val	Ser	Glu	Val	Pro	
			1085		_			1090					1099				
	TTA	GAC	CTA	TGT	TCA	GTG	TAT	GGG	AAT	GAT	TGT	TTC	AGC	TGT	TTT	ATG	1440
	Leu	Asp	Leu	Cys	Ser	Val	Tyr	Gly	Asn	Asp	Cys	Phe	Ser	Cys	Phe	Met	
		1100	)				1109	5				1110	)				
10	TCA	AGG	GAT	CCC	CTG	TGC	ACA	TGG	TAT	AAC	AAC	ACC	TGT	TCC	TTT	AAA	1488
	Ser	Arg	Asp	Pro	Leu	Cys	Thr	Trp	Tyr	Asn	Asn	Thr	Cys	Ser	Phe	Lys	
	1119	5				112	)				1125	5				1130	
	CAG	AGA	GTA	TCT	GTT	GAA	ACC	GGT	GGT	CCA	GCT	AAC	CGC	ACC	CTT	TCA	1536
	Gln	Arg	Val	Ser	Val	Glu	Thr	Gly	Gly	Pro	Ala	Asn	Arg	Thr	Leu	Ser	
15					1139	5				1140	)				114	5	
	GAA	ATG	TGT	GGT	GAC	CAC	TAT	GCT	CCA	ACT	GTG	GTT	AAG	CAT	CAA	GTT	1584
<b>بد</b> ر	Glu	Met	Cys	Gly	Asp	His	Tyr	Ala	Pro	Thr	Val	Val	Lys	His	Gln	Val	
0 .a				1150	)				1155	5				116	0		
	TCT	ATA	CCT	CTA	TTA	TCT	AAT	TCT	TAT	TTG	TCC	TGC	CCA	GCA	GTC	TCA	1632
20 📮	Ser	Ile	Pro	Leu	Leu	Ser	Asn	Ser	Tyr	Leu	Ser	Cys	Pro	Ala	Val	Ser	
20 4 7 5 5			1165	5				1170	)				1175	5			
14		CAC															1680
o o	Asn	His	Ala	Asp	Tyr	Phe	Trp	Thr	Lys	Asp	Gly	Phe	Thr	Glu	Lys	Arg	
Ξ		1180					1189					1190					
25 📋		CAT															1728
W	Cys	His	Val	Lys	Thr	His	Lys	Asn	Asp	Cys			Leu	Ile	Ala		
	1195					1200					1205					1210	
ū		ACG															1776
, W	Ser	Thr	Thr	Ala			Gly	Thr	His			Asn	Met	Lys			
30					1215			~~~	~=~	1220			ama	3 mg	122	<b>5</b>	1010
		GTG															1818
	Ser	Val	Thr		-	Leu	ьеи	GIU	•		vai	Thr	ьеu		^		
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	Met	Gly											Ile	Leu	Ser	Ala	
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		Thr	Ala	Ala		Ser	Ara	Phe	Ile		Lvs	Pro	Ara	Leu		Val	
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				20					25					30		
	Asn	Leu	Thr	Asp	Gly	Phe	Gly	Gln	His	Arg	Phe	Phe	Gly	Pro	Gln	Glu
			35					40					45			
	Pro	His	Thr	Val	Leu	Phe	His	Ser	Leu	Asn	Ser	Ser	Asp	Val	Tyr	Val
		50					55					60				
	Gly	Gly	Asn	Asn	Thr	Ile	Tyr	Leu	Phe	Asp	Phe	Ala	His	Ser	Ser	Asn
	65					70		,			75					80
	Ala	Ser	Thr	Ala		Ile	Asn	Ile	Thr		Thr	His	Asn	Thr		Arg
			_				_	_,	_,		_			_		<b>~</b> 1
	Leu	Ser	Ser		Cys	GIU	Asn	Pne		Thr	Leu	ьeu	HIS		GIN	Thr
	_	<b>a</b> 3	<b>.</b> .		n 1 -	<b>G</b>	G1			<b>0</b>	Q1	T	D		<b>C</b>	Ш
	Asp	GIÀ		ьeu	Ата	Cys	GIY		ASII	ser	GIII	пÀВ		ser	Cys	пр
	T 011	110		λαη	Lou	Thr	Thr		Dhe	T.Ou	Glv	Pro		T.011	Glv	T.011
	Leu		ASII	ASII	Deu	1111		GIII	FIIC	цец	GIY		цуз	Бец	Gry	Бец
	בות		Dho	Sor	Pro	Ser		Glv	Δen	T.e.11	Val		Phe	Asn	Gln	Agn
•		FIO	FIIC	Der	110		DCI	Gry	HJII	пса		шец	1110	пор	01	160
		Thr	Tvr	Ser	Thr		Asn	Leu	Tvr	Lvs		Leu	Ser	Glv	Ser	
	1101		-1-	501			•		-1-					1	175	
	Lvs	Phe	Ara	Ara		Ala	Glv	Gln	Val		Leu	Tyr	Thr	Ser	Asp	Thr
	-1-		5	_								1		190	•	
	Ala	Met	His	Arg	Pro	Gln	Phe	Val	Gln	Ala	Thr	Ala	Val	His	Lys	Asn
			195	-				200					205			
•	Glu	Ser	Tyr	Asp	Asp	Lys	Ile	Tyr	Phe	Phe	Phe	Gln	Glu	Asn	Ser	His
		210					215					220				
	Ser	Asp	Phe	Lys	Gln	Phe	Pro	His	Thr	Val	Pro	Arg	Val	Gly	Gln	Val
	225					230					235					240
	Cys	Ser	Ser	Asp	Gln	Gly	Gly	Glu	Ser	Ser	Leu	Ser	Val	Tyr	Lys	Trp
					245					250					255	
	Thr	Thr	Phe	Leu	Lys	Ala	Arg	Leu	Ala	Cys	Val	Asp	Tyr		Thr	Gly
				260					265					270		
	Arg	Ile	Tyr	Asn	Glu	Leu	Gln		Ile	Phe	Ile	Trp		Ala	Pro	Glu
			275	_	_									_	_	_
	Asn		Trp	Glu	Glu	Thr		Ile	Tyr	Gly	Leu		Leu	Ser	Pro	Trp
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		Phe	Ser	Ala	Val		Val	Phe	Thr	vaı		Asp	ire	Asp	HIS	
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	7	Dwo	C1	Cl n		Mot	Tara	7 an	ціс		Wie	Val	Pro	Thr		Thr
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	Dhe	Gl n	U≥1		Δεν	Δνα	ጥረድ	Pro		Val	Δla	Asn	Pro		Tvr	Gln
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	Lvs	Asp		Ala	Met	Phe	Pro		Ile	Gln	Ser	Lys		Ile	Tyr	Thr
		Pro Gly 65 Ala Leu Asp Leu Ala 145 Asp Lys Ala Glu Ser 225 Cys Thr Arg Asn Asn 305 Phe Arg	Pro His 50 Gly Gly 65 Ala Ser Leu Ser Asp Gly Leu Ile 130 Ala Pro 145 Asp Thr Lys Phe Ala Met Glu Ser 210 Ser Asp 225 Cys Ser Thr Thr Arg Ile Asn Ser 290 Asn Phe 305 Phe Lys Arg Pro	Pro His Thr 50 Gly Gly Asn 65 Ala Ser Thr Leu Ser Ser Asp Gly Leu 115 Leu Ile Asn 130 Ala Pro Phe 145 Asp Thr Tyr Lys Phe Arg Ala Met His 195 Glu Ser Tyr 210 Ser Asp Phe 225 Cys Ser Ser Thr Thr Phe Arg Ile Tyr 275 Asn Ser Trp 290 Asn Phe Ser 305 Phe Lys Thr Arg Pro Gly Phe Gln Val 355	Asn Leu Thr Asp	Asn Leu Thr Asp Gly	Asn Leu Thr Asp Gly Phe 35	Asn Leu Thr Asp Gly Phe Gly	Asn Leu Thr Asp Gly Phe Gly Gln	Asn Leu Thr Asp Gly Phe Gly Gln His	Asn Leu Thr Asp Gly Phe Gly Gln His Arg	Asn         Leu         Thr         Asp         Gly         Phe         Gly         Gln         His         Arg         Phe           Pro         His         Thr         Val         Leu         Phe         His         Ser         Leu         Asn         Ser           Gly         Gly         Asn         Asn         Thr         Ile         Tyr         Leu         Phe         Asp         Phe           Ala         Ser         Thr         Ala         Leu         Ile         Thr         Asp         Phe         Ile         Thr         Ser         Thr         Asp         Phe         Ile         Thr         Leu         Ile         Ile	Asn Leu Thr Asp Gly Phe Gly Gln His Arg Phe Phe 35	Asn Leu Thr Asp Gly Phe Gly Gln His Arg Phe Gly 35	Asn Leu Thr Asp Gly Phe Gly Gln His Arg Phe Phe Gly Pro  35	Asn Leu Thr Asp Gly Phe Gly Gln His Arg Phe Phe Gly Pro Gln 35

		370					375					380				
	Lys	Leu	Leu	Val	Tyr	Arg	Val	Glu	Tyr	Gly	Gly	Val	Phe	Trp	Ala	Thr
	385					390					395					400
	Ile	Phe	Tyr	Leu	Thr	Thr	Ile	Lys	Gly	Thr	Ile	His	Ile	Tyr	Val	Arg
5					405					410					415	
	Tyr	Glu	Asp	Ser	Asn	Ser	Thr	Thr	Ala	Leu	Asn	Ile	Leu	Glu	Ile	Asn
				420					425					430		
	Pro	Phe	Gln	Lys	Pro	Ala	Pro	Ile	Gln	Asn	Ile	Leu	Leu	Asp	Asn	Thr
			435					440					445			
10	Asn	Leu	Lys	Leu	Tyr	Val	Asn	Ser	Glu	${\tt Trp}$	$\operatorname{Glu}$	Val	Ser	Glu	Val	Pro
		450					455					460				
	Leu	Asp	Leu	Cys	Ser	Val	Tyr	Gly	Asn	Asp	Cys	Phe	Ser	Cys	Phe	Met
	465					470					475					480
	Ser	Arg	Asp	Pro	Leu	Cys	Thr	${\tt Trp}$	Tyr	Asn	Asn	Thr	Cys	Ser	Phe	Lys
15					485					490					495	
	Gln	Arg	Val	Ser	Val	Glu	Thr	Gly	Gly	Pro	Ala	Asn	Arg	Thr	Leu	Ser
				500					505					510		
võ	Glu	Met	Cys	Gly	Asp	His	Tyr	Ala	Pro	Thr	Val	Val	Lys	His	Gln	Val
回 20 <del>年</del> 上			515					520					525			
20 🚝	Ser	Ile	Pro	Leu	Leu	Ser	Asn	Ser	Tyr	Leu	Ser	Cys	Pro	Ala	Val	Ser
N		530					535					540				
Ų	Asn	His	Ala	Asp	Tyr	Phe	${\tt Trp}$	Thr	Lys	Asp	Gly	Phe	Thr	Glu	Lys	Arg
ij	545					550					555					560
=	Cys	His	Val	Lys	Thr	His	Lys	Asn	Asp	Cys	Ile	Leu	Leu	Ile	Ala	Asn
25 📮					565					570					575	
W H D	Ser	Thr	Thr	Ala	Thr	Asn	Gly	Thr	His	Val	Cys	Asn	Met	Lys	Glu	Asp
				580					585					590		
Ō	Ser	Val	Thr	Val	Lys	Leu	Leu	Glu	Val	Asn	Val	Thr	Leu	Met		
Ũ.			595					600					605			
30																